



# **Resource Protection Area: Buffer Area Encroachments**

## **Guidance on the Chesapeake Bay Preservation Area Designation and Management Regulations**

*September 16, 2002*

### **Purpose:**

This document provides local planners and officials with guidance on requirements of the Chesapeake Bay Preservation Act with regard to the circumstances under which structures such as buildings and other impervious surfaces may be placed in the buffer area. Information of the circumstances for removing vegetation for sight lines, views and vistas, shoreline erosion control projects, woodlot management and pathways will be prepared in the future as part of an ongoing grant project.

The Bay Act Regulations establish the Resource Protection Area (RPA) as the “landward” component of the Chesapeake Bay Preservation Area. RPA’s are composed of tidal wetlands, non-tidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow, tidal shores, such other lands considered necessary to protect the quality of state waters and a 100 foot buffer adjacent to and landward of these features. The buffer component is an extremely important part of the RPA, as it filters nonpoint source pollution, controls erosion and retards runoff.

### **Regulations:**

- Section 9VAC10-20-80.B.5 requires a buffer area of not less than 100 feet in width as the landward component of Resource Protection Areas (RPAs).
- Section 9VAC10-20-130.1 lists the land development activities or uses that are permitted to occur within the Resource Protection Area, including the 100-foot buffer area component. These include: water dependent facilities, redevelopment activities, roads and drives under certain circumstances, and stormwater management and flood control facilities under certain circumstances.
- Section 9VAC10-20-1.a requires a Water Quality Impact Assessment to be submitted for any land disturbing activity within an RPA, including the buffer component.
- Section 9VAC10-20-130.3 states “[t]he 100-foot wide buffer area shall be the landward component of the Resource Protection Area...” and continues by noting “[n]otwithstanding permitted uses, encroachments, and vegetation clearing as set forth in this section, the 100-foot wide buffer area is not reduced in width. To minimize the adverse effects of human activities on the other components of the Resource Protection Area, state waters, and aquatic life, a 100-foot wide buffer area of vegetation that is effective in retarding runoff, preventing erosion, and filtering nonpoint source pollution from runoff shall be retained if present and established where it does not exist.”

- Section 9VAC10-20-130.4.a and b outline the conditions under which encroachments for new structures may be approved under an administrative process by a local government and the conditions that must be met when approving these encroachments.

## **Discussion:**

As the landward component of the RPA, the buffer area is extremely important to the protection of the remaining RPA components and water quality. The functions of the buffer serve to not only protect the tidal shores, tidal wetlands and nontidal wetlands that comprise the remainder of the RPA, it also serves to protect water bodies with perennial flow from additional pollution inputs.

Nonpoint source pollution is a cumulative phenomenon. Nonpoint source pollution is a significant contributor to overall water quality concerns, because the land area draining to the Chesapeake Bay and its tributaries is vast. Nonpoint source pollution is also an incremental phenomenon in that its effects are exacerbated over time and distance. Lands nearest to water resources do not necessarily contribute the most pollution but their proximity makes the impact immediate and these lands represent the last opportunity for pollution control and prevention. Although a vegetated buffer has many additional functions, the buffer area as outlined in the Regulations has three primary functions: retard runoff, prevent erosion and filter pollution,

The buffer area works to retard runoff by slowing down the speed of the overland surface water, which enables the water to filter through the surface of the ground and be taken up the plant roots. This function helps to prevent channels from forming and also enhances the pollutant removal capacity of the buffer area. Retarding runoff is one way that the buffer area assists in the prevention of soil erosion.

The buffer area prevents erosion by trapping and holding surface water that flows across it. The vegetation in the buffer area not only slows down the velocity of the runoff, but enhances the filtering of sediment. The roots of the vegetation actually bind the soil, preventing erosion from occurring in close proximity to the water feature or wetland. A vegetated buffer also helps to prevent erosion because the vegetation helps to protect the ground surface from rain impact. All these functions are enhanced if the buffer is forested.

Research in the decade since the Regulations were first promulgated supports vegetated buffer areas adjacent to wetlands and other water features for water quality protection and improvement purposes. In fact, numerous states have voluntary or mandatory vegetated buffer requirements as part of an overall water quality protection program. Research indicates that vegetated buffer areas adjacent to wetlands or other water features can not only function to remove pollutants from stormwater runoff over land but, when forested, buffer areas can function to remove pollution from groundwater by absorbing it through the tree roots.

The Chesapeake Bay Program recognized the significance of vegetated buffers. In 1996 the Riparian Forested Buffer Initiative was adopted by the signatories of the Chesapeake Bay Agreement with the goal of restoring 2010 miles of riparian-forested buffers in the signatory states by the year 2010. In the time since that initiative began, Virginia has agreed to partner with the USDA to implement the Conservation Reserve Enhancement Program (CREP). This program seeks to provide financial assistance to farmers for the purpose of setting aside additional land area for vegetated buffers. CREP and the Riparian Forest Buffer Initiative, are just two large-scale programs designed to promote and increase the amount of vegetated buffers for water quality improvement. In conjunction with these programs, the Bay Act program

seeks to preserve existing vegetated buffers for water quality protection.

In addition to the water quality benefits of buffers, many land use ordinances use buffers to separate incompatible uses and in one sense, the RPA 100-foot buffer serves in this capacity. The ability of the buffer to separate man-made structures and land disturbances from the wetlands and other water bodies is one of the more important functions of the buffer area, and is a significant reason it is the landward component of the RPA.

Given the importance of the buffer area in protecting water quality, the Regulations outline additional criteria that must be adhered to relating to encroachments of structures and buildings in the buffer area, as well as the circumstances for removing vegetation in the buffer area. As the water quality functions of the buffer area are directly related to the presence of filtering vegetation, placement of impervious surfaces that change or inhibit this natural filtering capacity is to be carefully monitored and mitigation to address the loss of function is necessary. Also, the removal of vegetation in the buffer area that provides for the filtering, runoff control and erosion control must also be limited to those types of activities outlined in the Regulations, and mitigation for the removal of vegetation must be required.

## Conclusions:

Based on these factors and the Regulations, the Department provides the following guidance regarding buffer modification and encroachments:

***Buffer Area reductions*** - The buffer area is never reduced in width. The Regulations make it very clear that the buffer area must, in all cases, be 100 feet in width and that the presence of structures, uses, encroachments or vegetation clearing does not reduce the width of the buffer component. When encroachments are permitted, either (1) as a permitted development or redevelopment activity, or (2) as a new structure on lots recorded prior to October 1, 1989 or between that date and March 1, 2002, the designation of the buffer area as the landward component of the RPA remains

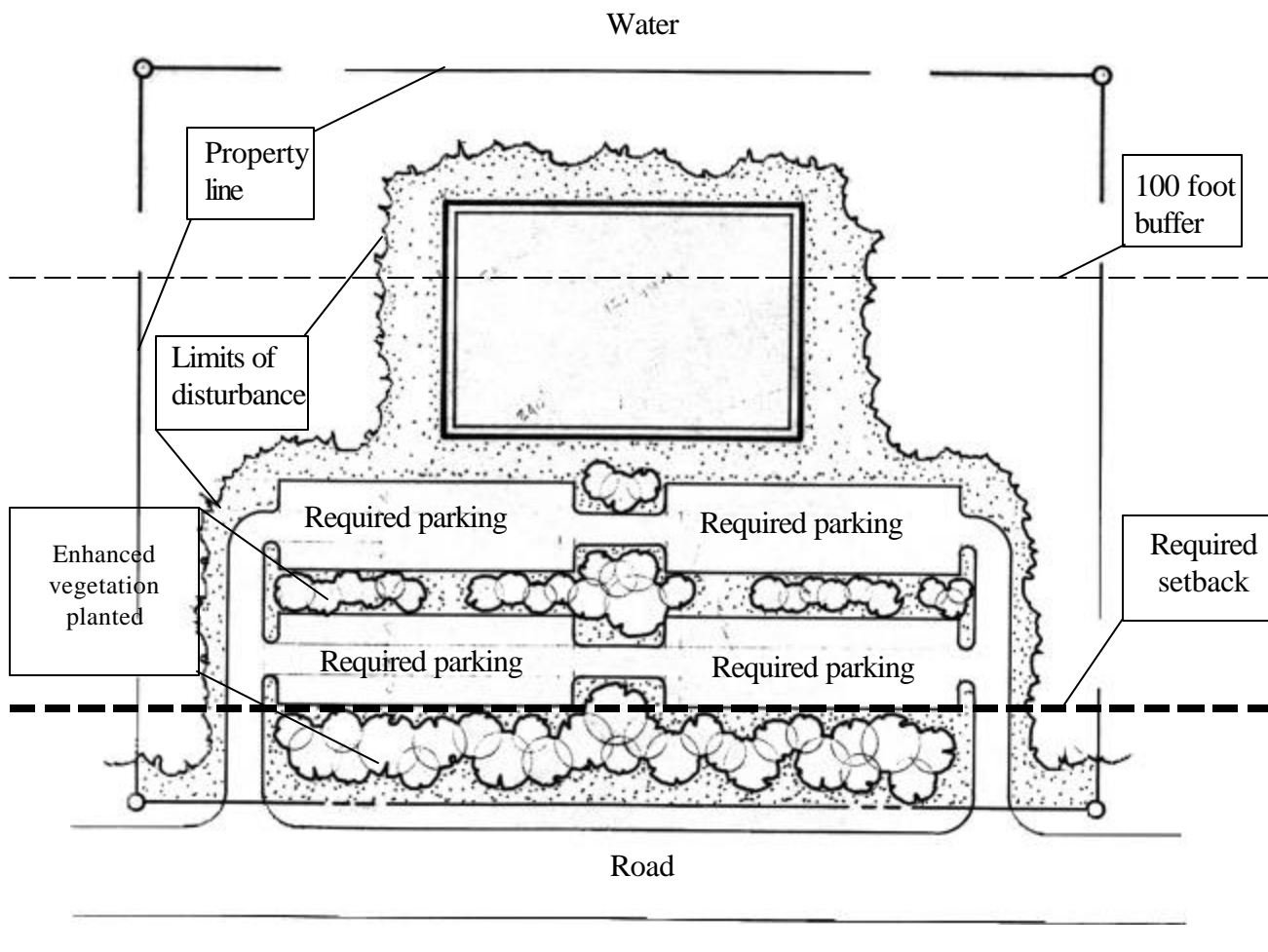
***Buffer encroachment for new development*** - Under the circumstances outlined in the Regulations, encroachments may be permitted within the buffer area for the construction of buildings or other structures. The guidance document, *Resource Protection Areas: Permitted Uses and Development* will discuss in greater detail the permitted development activities within the Resource Protection Area. For other structures, buildings and other structures may be placed in the buffer on to lots recorded prior to October 1, 1989 and also on certain other lots that may have been recorded between October 1, 1989 and March 1, 2002. **However, this administrative review and approval is permitted only for a principal structure and necessary utilities, and only when the application of the full 100-foot buffer would render the lot unbuildable.** In both cases, the encroachment is to be the minimum necessary to permit the construction of a principal structure and necessary utilities and in no way permits the width to be reduced for the full length of the buffer .

Webster's Dictionary (9<sup>th</sup> edition) defines "principal" as "...a matter or thing of primary importance." Using this definition, a principal structure would be one primary structure. Furthermore, the principal structure would be one that is necessary to use the land in the manner permitted by the underlying zoning classification. Necessary utilities includes such things as electric and telecommunication lines, water and on-site or public sewage disposal facilities.

While this provision most often relates to residential properties, it is possible for proposed development on a pre-1989 commercial or industrial lot to be considered under this provision. For commercial or industrial development, the principal structure provision would apply to such things as a warehouse (but not the parking area); a convenience store (but not gasoline pumps, etc); or an office building (but not several office buildings). Reviewing and approving administrative waivers for non-residential properties is more dependent on the underlying zoning district requirements in terms of the types of development that are allowed. However, just because a lot or parcel was recorded prior to October 1, 1989 does not mean that the entire landward 50 feet of the buffer area can be developed under this provision. As is discussed below, the relief afforded to any pre-recorded lot or parcel must be the “minimum necessary.”

### Example 1 - Non-residential development encroachment

---



For residential development, the Department considers a principal structure to be a house, which may include a front porch, and stairs etc. necessary for accessing the house, and it may include an attached garage, depending on the situation. While some localities consider an attached deck as part of the principal structure, the Department does not encourage the approval of encroachments into the buffer area under this provision for the purpose of placing an attached deck. Some localities have begun to require building setback lines from the edge of the RPA itself, to ensure adequate area for future additions such as decks and

patios, and yard area without encroachments into the RPA. Items not considered as part of a principal structure include pools, gazebos, patios, free-standing decks or garages, or storage sheds, etc.

In considering and granting these administrative waivers, the Department also notes that the size, location, orientation, etc. of the proposed structure should be reviewed by the locality for consistency with the requirement of “minimum necessary to achieve a buildable area for a principal structure and necessary utilities.” In some cases, the sole reason a property owner requests an administrative waiver for a pre-1989 lot is to place a house with a large footprint on a small lot. In other cases, the request is made because the property owner wishes to be closer to the water. The local government should not approve an administrative waiver under either of these circumstances. Such requests should be considered under the formal exception request.

The location of soils suitable for an onsite septic system and drainfield and the encumbrance of the vast majority of a lot or parcel by the RPA, are two of the situations that warrant the approval of an administrative waiver on lots recorded prior to October 1, 1989. The figure below illustrates one situation where such a waiver is warranted.

### Example 2 - Residential development encroachment

---

